AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all previous listings and versions of claims in this application.

1. (Original) An electric motor linear speed controller, comprising:

a digital to analog converter means for converting an 8-bit digital signal to an analog voltage for setting voltage across a motor;

a digital state machine means for converting the duty cycle of an input signal for output to the digital to analog converter means; and

a closed loop feedback loop means for monitoring and setting the voltage across the motor.

2. (Original) The controller according to claim 1, further comprising an over-current sense circuit for monitoring the current across the electric motor.

3. (Original) The controller according to claim 1, further comprising an over/under voltage sense circuit for monitoring a supply voltage to the electric controller.

4. (Previously Presented) A circuit arrangement in a variable speed electric motor controller, comprising:

a controller logic circuit for operating a controller logic finite state machine, wherein the state machine sets the voltage supplied to an electric motor; and

a closed loop feedback circuit for generating a signal indicating the voltage across the electric motor, the signal being input to the state machine for monitoring thereof.

5. (Original) The circuit arrangement of claim 4, wherein the state machine comprises at least a running state.

6. (Original) The circuit arrangement of claim 5, further comprising one or more of the following set of states: a sleep state, a lockout state, an overcurrent state, a timeout state, or a battery check state.

7. (Original) The circuit arrangement of claim 4, wherein the controller logic circuit comprises a microprocessor and a memory, each configured for collectively controlling the state machine.

8. (Original) The circuit arrangement of claim 4, additionally comprising a digital to analog converter for converting an 8-bit digital signal to an analog voltage for setting the voltage supplied to the electric motor.

9. (Original) The circuit arrangement of claim 4, wherein the circuit arrangement is directly coupled with the electric motor.

10. (Previously Presented) A system for controlling an electric automotive component comprising a component and the electric motor linear speed controller of claim 1.

11. (Original) The system according to claim 10, wherein the component is an electric motor.

12. (Original) The system according to claim 10, wherein the component is an electric light.

13. (Original) The system according to claim 10, further comprising an over-current sense circuit for monitoring the current across the electric motor.

14. (Original) The system according to claim 10, further comprising an over/under voltage sense circuit for monitoring a supply voltage to the electric controller.

15. (Currently Amended) A system for controlling the speed of an electric motor~~, the voltage across the electric motor determining the speed of the electric motor, the system~~ comprising:

a digital to analog converter means, for converting a digital signal to analog voltage for setting a voltage across said electric motor;

a microprocessor and associated digital memory for generating the digital signal, said microprocessor configured to instantiate and operate a digital state machine for converting

the duty cycle of an input signal generated by an associated closed loop feedback means, wherein the state machine sets the voltage supplied to the electric motor; and

a closed loop feedback loop means, for monitoring the voltage across said motor and generating a signal for input to the microprocessor.

16. (Original) An automobile comprising the system of claim 15.

17. (Original) The automobile of claim 16, wherein the system comprises a temperature-control system.

18. (Currently Amended) A linear speed control for an automotive electric motor, comprising:

a digital state machine for converting the duty cycle of an input signal generated by an associated closed loop feedback loop;

an over-current sense circuit, for monitoring the current across said electric motor;

an over/under voltage sense circuit, for monitoring a supply voltage to the electric controller;

a digital to analog converter, for converting an 8-bit digital signal to analog voltage for setting voltage across said electric motor; and

a closed loop feedback loop, for monitoring the voltage across said motor and generating a signal for input to said digital state machine.